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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
09/440,829	11/15/99	CHENCHIK	A	CLON-015

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BRET E. FIELD
BOZICEVIC, FIELD & FRANCIS, LLP
200 Middlefield Road
Suite 200
Menlo Park CA 94025

EXAMINER	
FORMAN, B	
ART UNIT	**PAPER NUMBER**
1655	8

DATE MAILED: 12/29/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/440,829	CHENCHIK ET AL.	
	Examiner	Art Unit	
	BJ Forman	1655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 November 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) *24-34* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23 and 35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

DETAILED ACTION

1. Applicant's election with traverse of Group I, claims 1-23 and 35, filed 30 November 2000 in Paper No. 7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 24-34 are withdrawn from further consideration.

Claims 1-23 & 35 are discussed below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 1-23 & 35 are indefinite in Claims 1, 14 & 23 for the recitations "50 to 120 nt in length", "60-100 nt in length" and" 65-90 nt in length" because "nt" is an abbreviation the meaning of which may change over time. It is suggested that Claims 1, 14 & 23 be amended to replace "nt" with "nucleotides".

b. Claims 1-23 are indefinite in the recitation "probe oligonucleotide spot" because "spot" is a non-specific dimensional term of undefined parameters i.e. size, shape, volume etc. and therefore the "spot" is undefined. It is suggested that the claims be amended to define the "spot".

c. Claims 1- 13 are indefinite in Claim 1, lines 1-2 for the recitation "stably associated" because "stably" is a quantitative term which requires definite or criteria for determining. The recitation is further in definite because "associated" is a non-specific relational term and

therefore the relationship between the "spot" and the "surface" is undefined. It is suggested that Claim 1 be amended to define or recite criteria for determining "stably" and to define the relationship between the "spot" and the "surface.

d. Claims 1-13 are indefinite in Claim 1, line 3 for the recitation "corresponds" because the term is a non-specific relational term and therefore the relationship between the "pattern" and "target" is undefined. It is suggested that Claim 1 be amended to define the relationship e.g. replace "corresponds" with "hybridizes".

e. Claims 4 & 6 are indefinite for the recitations "high hybridization efficiency" because "high" is a quantitative and "efficiency" is a qualitative term both of which require definition or criteria for determining. It is noted that the specification recites on page 25 general methods for determining hybridization efficiency, but the limitations of the claim do not clearly define the claimed invention. It is suggested that Claim 4 be amended to define or recite criteria for determining "high hybridization efficiency".

f. Claim 5 is indefinite in the recitation "low propensity for non-specific hybridization" because "low" is a quantitative and "non-specific" is a qualitative term both of which require definition or criteria for determining. It is noted that the specification recites on page 24 general methods for determining non-specific hybridization, but the limitations of the claim do not clearly define the claimed invention. It is suggested that the claim be amended to define or recite criteria for determining "low propensity for non-specific hybridization".

g. Claim 6 is indefinite in the recitation "substantially the same" because "substantially" is a non-specific relational term and therefore it is unclear how the "probes" relate to the "efficiency". It is suggested that the claim be amended to define the relationship e.g. delete "substantially".

h. Claim 6 is further indefinite in the recitation "probe long oligonucleotides" which appears to be a typographical error. It is suggested that the claim be amended to correct the error i.e. replace "probe long oligonucleotides" with " long oligonucleotide probes".

i. Claims 10 & 11 are indefinite in Claim 10 for the recitation "the density" because "density" lacks proper antecedent basis in the claim. It is suggested that Claim 10 be amended to recite "wherein the spots on said array do not exceed a density of about 400/cm^2."

j. Claims 12 & 13 are indefinite in the recitations "the number of" because "number lacks proper antecedent basis in Claim 1. It is suggested that the claims be amended to recite "wherein the spots on said array range from about 50 to 10,000 in number.

k. Claim 14-22 are indefinite in Claim 14 for the recitation "each probe oligonucleotide spot corresponds to a target nucleic acid" because "corresponds" is a non-specific relational term and therefore the relationship between the "spot" and "target" is undefined. It is suggested that Claim 14 be amended to define the relationship e.g. replace "corresponds" with "hybridizes".

l. Claims 14-22 are indefinite in Claim 14 for the recitation "high hybridization efficiency" because "high" is a quantitative and "efficiency" is a qualitative term both of which require definition or criteria for determining. It is noted that the specification recites on page 25 general methods for determining hybridization efficiency, but the limitations of the claim do not clearly define the claimed invention. It is suggested that Claim 14 be amended to define or recite criteria for determining "high hybridization efficiency".

m. Claims 14-22 are indefinite in Claim 14 for the recitation "low propensity for non-specific hybridization" because "low" is a quantitative and "non-specific" is a qualitative term both of which require definition or criteria for determining. It is noted that the specification recites on page 24 general methods for determining non-specific hybridization, but the limitations of the claim do not clearly define the claimed invention. It is suggested that Claim 14 be amended to define or recite criteria for determining "low propensity for non-specific hybridization".

n. Claims 14-22 are indefinite in Claim 14 for the recitation "substantially the same" because "substantially" is a non-specific relational term and therefore it is unclear how the

"probes" relate to the "efficiency". It is suggested that Claim 14 be amended to define the relationship e.g. delete "substantially".

o. Claims 16 & 17 are indefinite in the recitations "corresponds" the term is a non-specific relational term and therefore the relationship between the "pattern" and "target" is undefined. It is suggested that Claim 1 be amended to define the relationship e.g. replace "corresponds" with "hybridizes".

p. Claim 18 is indefinite in the recitations "the length of" because "length" lacks proper antecedent basis in Claim 14. It is suggested that the claim be amended to recite "wherein the spots on said array range from about 65 to 90 nucleotides in length

q. Claims 19 & 20 are indefinite for the recitations "the density" because "density" lacks proper antecedent basis in the claim. It is suggested that the claims be amended to recite "wherein the spots on said array do not exceed a density of about 400/cm^2."

r. Claims 21 & 22 are indefinite in the recitations "the number of" because "number lacks proper antecedent basis in Claim 14. It is suggested that the claims be amended to recite "wherein the spots on said array range from about 50 to 10,000 in number.

s. Claim 23 is indefinite in the recitation "each probe oligonucleotide spot corresponds to a target nucleic acid" because "corresponds" is a non-specific relational term and therefore the relationship between the "spot" and "target" is undefined. It is suggested that the claims be amended to define the relationship e.g. replace "corresponds" with "hybridizes".

t. Claim 23 is indefinite in the recitation "high hybridization efficiency" because "high" is a quantitative and "efficiency" is a qualitative term both of which require definition or criteria for determining. It is noted that the specification recites on page 25 general methods for determining hybridization efficiency, but the limitations of the claim do not clearly define the claimed invention. It is suggested that the claim be amended to define or recite criteria for determining "high hybridization efficiency".

u. Claim 23 is indefinite in the recitation "low propensity for non-specific hybridization" because "low" is a quantitative and "non-specific" is a qualitative term both of which require definition or criteria for determining. It is noted that the specification recites on page 24 general methods for determining non-specific hybridization, but the limitations of the claim do not clearly define the claimed invention. It is suggested that the claim be amended to define or recite criteria for determining "low propensity for non-specific hybridization".

v. Claim 23 is indefinite in the recitation "substantially the same" because "substantially" is a non-specific relational term and therefore it is unclear how the "probes" relate to the "efficiency". It is suggested that the claim be amended to define the relationship e.g. delete "substantially".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6 & 10-13 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Brown et al. (U.S. Patent No. 5,807,522, issued 15 September 1998).

Regarding Claim 1, Brown et al. disclose an array (i.e. a multi-cell substrate) comprising at least one pattern of probe oligonucleotide spots (i.e. cells of the multi-cell substrate, each cell comprising a microarray; Column 11, lines 52-67) wherein the probe spots are stably associated with the surface of a solid support (Column 4, lines 35-44), wherein each probe spot corresponds to a target nucleic acid and comprises a composition of probes that range in length from about 50 to 120 nt (Column 13, lines 21-25).

Regarding Claim 2, Brown et al. disclose the array (multi-cell substrate) wherein two or more different target nucleic acids are represented in said pattern (Column 4, lines 52-55).

Regarding Claim 3, Brown et al. disclose the array (multi-cell substrate) wherein each oligonucleotide spot (microarray) corresponds to a different target nucleic acid i.e. different target yeast nucleic acids are arrayed in different spots (cells) of the array (Example 3, Column 18, lines 39-43).

Regarding Claim 4, Brown et al. disclose the array wherein each probe of the array has a high hybridization efficiency for its respective target i.e. each probe binds specifically to its binding partner and therefore has a high hybridization efficiency for its target (Column 6, lines 25-28 and 64-67).

Regarding Claim 5, Brown et al. disclose the array wherein each probe of the array has a low propensity for non-specific hybridization i.e. the probes bind specifically to its binding partner and therefore has a low propensity for non-specific hybridization (Column 6, lines 25-28 and 64-67).

Regarding Claim 6, Brown et al. disclose the array wherein each of said probes of said array exhibit substantially the same high hybridization efficiency for their respective targets i.e. the probes of each spot bind specifically to their binding partners and therefore exhibit substantially the same high hybridization efficiency (Column 6, lines 64-67 and Column 13, lines 16-20).

Regarding Claim 10, Brown et al. disclose the array (multi-cell substrate) wherein the density of spots (cells) on said array does not exceed about 1000/cm^2 (Column 11, lines 62-67).

Regarding Claim 11, Brown et al. disclose the array (multi-cell substrate) wherein the density of spots (cells) on said array does not exceed about 400/cm^2 (Column 11, lines 62-67).

Regarding Claim 12, Brown et al. disclose the array (multi-cell substrate) wherein the number of spots (cells) on said array ranges from about 50 to 10,000 i.e. 96 (Column 11, lines 62-67).

Regarding Claim 13, Brown et al. disclose the array (multi-cell substrate) wherein the number of spots (cells) on said array ranges from about 50 to 1,000 i.e. 96 (Column 11, lines 62-67).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 7, 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (U.S. Patent No. 5,807,522, issued 15 September 1998) and Chetverin et al. (WO 93/17126, 2 September 1993).

Regarding Claim 7, Brown et al. teach the array (i.e. a multi-cell substrate) comprising at least one pattern of probe oligonucleotide spots (i.e. cells of the multi-cell substrate each cell comprising a microarray; Column 11, lines 52-67) wherein the probe spots are stably associated with the surface of a solid support (Column 4, lines 35-44), wherein each probe spot corresponds to a target nucleic acid and comprises a composition of probes that range in length from about 50 to 120 nt (Column 13, lines 21-25) but they do not teach the probes are covalently attached to said surface of said substrate. Chetverin et al. teach a similar array comprising at least one pattern of probe oligonucleotide spots stably associated with the surface of a solid support and wherein said probes are covalently attached to said surface of said substrate (page 7, first full paragraph and Claim 1) wherein the covalent attachment simplifies amplification by permitting vigorous washing of the covalently bound hybrids for purification of the hybrids prior to amplification (page 16, first full paragraph). It would have

been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the stably associated probes of Brown et al. with the covalently attached probes of Chetverin et al. for the expected benefit of simplified hybrid purification and subsequent amplification.

Regarding Claim 14, Brown et al. teach an array (i.e. a multi-cell substrate) comprising a pattern of probe oligonucleotide spots (i.e. cells of the multi-cell substrate) (Column 11, lines 52-67) wherein the probe spots are bound to the surface of a solid support, wherein each probe spot corresponds to a target nucleic acid and comprises a composition of probes that range in length from about 60 to 100 nt (Column 13, lines 21-25) and wherein each of said probes exhibits substantially the same high hybridization efficiency with its respective target and a low level of non-specific hybridization i.e. the probes of each spot bind specifically to their binding partners and therefore exhibit substantially the same high hybridization efficiency and a low level of non-specific hybridization (Column 6, lines 64-67 and Column 13, lines 16-20) but they do not teach the probes are covalently attached to said surface of said substrate. Chetverin et al. teach a similar array comprising at least one pattern of probe oligonucleotide spots stably associated with the surface of a solid support and wherein said probes are covalently attached to said surface of said substrate (page 7, first full paragraph and Claim 1) wherein the covalent attachment simplifies amplification by permitting vigorous washing of the covalently bound hybrids for subsequent amplification (page 16, first full paragraph). It would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the stably associated probes of Brown et al. with the covalently attached probes of Chetverin et al. for the expected benefit of simplified hybrid purification and subsequent amplification.

Regarding Claim 15, Brown et al. teach the array wherein a ten or more different target nucleic acids are represented in said patterns i.e. 24 clones (Example 2, Columns 17-18)

Regarding Claim 16, Brown et al. teach the array wherein each oligonucleotide spot (cell) corresponds to a different target nucleic acid i.e. different target yeast nucleic acids are arrayed in different spots (cells) of the array (Example 3, Column 18, lines 39-43).

Regarding Claim 17, Brown et al. teach the array wherein two or more oligonucleotide spots correspond to the same target nucleic acid (Column 13, lines 4-10).

Regarding Claim 18, Brown et al. teach the array wherein the length of each of said unique oligonucleotides ranges from about 65 to 90 nucleotides i.e. at least 50 base pairs (Column 13, lines 21-22).

Regarding Claim 19, Brown et al. teach the array wherein the density of spots on said array does not exceed about 1000/cm^2 (Column 11, lines 62-67).

Regarding Claim 20, Brown et al. teach the array wherein the density of spots on said array does not exceed about 400/cm^2 (Column 11, 62-67).

Regarding Claim 21, Brown et al. teach the array wherein the number of spots on said array ranges from about 50 to 50,000 i.e. 96 (Column 11, 62-67).

Regarding Claim 22, Brown et al. teach the array wherein the number of spots on said array ranges from about 50 to 10,000 i.e. 96 (Column 11, 62-67).

Regarding Claim 23, Brown et al. teach an array (i.e. a multi-cell substrate) comprising a pattern of probe oligonucleotide spots (i.e. cells of the multi-cell substrate) (Column 11, lines 52-67) wherein the density of spots on said array does not exceed about 400/cm^2 (Column 11, 62-67) wherein the probe spots are bound to the surface of a solid support, wherein each probe spot corresponds to a target nucleic acid and comprises a composition of probes that range in length from about 65 to 90 nt (Column 13, lines 21-25) wherein each of said probes exhibits substantially the same high hybridization efficiency with its respective target and a low level of non-specific hybridization i.e. the probes of each spot bind specifically to their binding partners and therefor exhibit substantially the same high hybridization efficiency and low level of non-specific hybridization (Column 6, lines 64-67 and Column 13, lines 16-20) but they do not

teach the probes are covalently attached to said surface of said substrate. Chetverin et al. teach a similar array comprising at least one pattern of probe oligonucleotide spots stably associated with the surface of a solid support and wherein said probes are covalently attached to said surface of said substrate (page 7, first full paragraph and Claim 1) wherein the covalent attachment simplifies amplification by permitting vigorous washing of the covalently bound hybrids for subsequent amplification (page 16, first full paragraph). It would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the stably associated probes of Brown et al. with the covalently attached probes of Chetverin et al. for the expected benefit of simplified hybrid purification and subsequent manipulation.

8. Claims 8 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (U.S. Patent No. 5,807,522, issued 15 September 1998) in view of Chetverin et al. (WO 93/17126, 2 September 1993) and Graves D. (TibTech, March 1999, 17: 127-134).

Regarding Claims 8 & 9, Brown et al. teach the array (i.e. a multi-cell substrate) comprising at least one pattern of probe oligonucleotide spots (i.e. cells of the multi-cell substrate) (Column 11, lines 52-67) wherein the probe spots are stably associated with the surface of a solid support (Column 4, lines 35-44), wherein each probe spot corresponds to a target nucleic acid and comprises a composition of probes that range in length from about 50 to 120 nt (Column 13, lines 21-25) but they do not teach the probes are cross-linked to said surface of said substrate. Chetverin et al. teach a similar array comprising at least one pattern of probe oligonucleotide spots stably associated with the surface of a solid support and wherein said probes are covalently attached to said surface of said substrate (page 7, first full paragraph and Claim 1) wherein the covalent attachment simplifies amplification by permitting vigorous washing of the covalently bound hybrids for subsequent amplification (page 16, first full paragraph) but Chetverin et al. do not each the probes are cross-linked to the surface of

said substrate at at least one site (Claim 8) and at at least two sites (Claim 9). However, probes cross-linked to the surface of a support were known and practiced in the art at the time the claimed invention was made as taught by Graves. Specifically, Graves teaches long oligonucleotide probes cross-linked to a support to firmly anchor the probes at multiple sites (page 131, third full paragraph, lines 1-13). It would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the probe attachments of Brown et al. and Chetverin et al. with the cross-linked attachment of Graves for the expected benefit of firmly attaching long probes to the support at taught by Graves.

9. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (U.S. Patent No. 5,807,522, issued 15 September 1998) and Stratagene (catalog, 1988). Regarding Claim 35, Brown et al. teach the components of an array (i.e. a multi-cell substrate) comprising at least one pattern of probe oligonucleotide spots i.e. cells of the multi-cell substrate wherein each cell comprises a microarray (Column 11, lines 52-67) wherein the probe spots are stably associated with the surface of a solid support (Column 4, lines 35-44), wherein each probe spot corresponds to a target nucleic acid and comprises a composition of probes that range in length from about 50 to 120 nt (Column 13, lines 21-25) but Brown et al. do not each the components combined in to a kit. Stratagene catalog teaches a motivation to combine reagents into kit format (page 39). It would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to combine the array components of Brown et al. into a kit format as discussed by Stratagene catalog since the Stratagene catalog teaches a motivation for combining reagents of use in an assay into a kit, "Each kit provides two services: 1) a variety of different reagents have been assembled and pre-mixed specifically for a defined set of experiments. 2) The other service provided in a kit is quality control" (page 39, column 1).

Double Patenting

10. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

11. Claim 1 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 10 of copending Application No. 09/417,268. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 1-23 & 35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 & 53 of copending Application No. 09/417,268. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an array

comprising at least one pattern of probe oligonucleotide spots stably associated with the surface of a solid support wherein they differ only in the instant claims recite "high hybridization efficiency" and "low propensity for non-specific hybridization". However, the instant probe-target hybridization efficiency and specificity are not patentably distinct from the '268 claimed target-specific probes i.e. which hybridize to different regions of the target (Claim 2), which hybridize to non-overlapping regions of a target (Claim 3), and unique oligonucleotides which hybridize to overlapping regions of a target (Claim 4) because it would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made that the '268 probe-target specificity would result in recite "high hybridization efficiency" and "low propensity for non-specific hybridization".

14. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Requirement to Comply with Nucleic Acid Sequence Rules

15. This application contains sequence disclosures in Table 1 that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures. Applicant must comply with the requirements of the sequence rules (37 CFR 1.821 - 1.825) before the application can be examined under 35 U.S.C. §§ 131 and 132.

Applicant is given a period of time which is co-extensive with the time to reply to the above Office Action within which to comply with the sequence rules, 37 CFR 1.821 - 1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 CFR 1.821(g). Extensions of time may be obtained by filing a petition accompanied

by the extension fee under the provisions of 37 CFR 1.136(a). Direct the reply to the undersigned. Applicant is requested to return a copy of the attached Notice to Comply with the reply.

Conclusion

16. No claim is allowed.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (703) 306-5878. The examiner can normally be reached on 6:45 TO 4:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones can be reached on (703) 308-1152. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-8724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

BJ Forman, Ph.D.
December 27, 2000

Lisa B. Arthur

LISA B. ARTHUR
PRIMARY EXAMINER
GROUP ~~1800~~ 1600